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Indiana Public Retirement System

1977 Police Officers' and Firefighters' Pension and Disability Fund

Actuarial Valuation as of
June 30, 2011

pwc

January 31, 2012

Board of Trustees
Indiana Public Retirement System
1 North Capitol, Suite 001
Indianapolis, IN 46204

Re: Certification of the Actuarial Valuations of the Indiana Public Retirement System as of as of June 30, 2011

Dear Board of Trustees:

Actuarial valuations are performed annually for the Indiana Public Retirement System ("INPRS") defined benefit pension plans ("Plans"). The results of the latest actuarial valuations, which were prepared as of June 30, 2011, are presented in individual valuation reports for each fund and were prepared pursuant to the engagement letter between INPRS and PricewaterhouseCoopers LLP ("PwC"), dated June 7, 2010. The reports are intended to provide the Board of Trustees ("Board") with information on the funded status of the Plans, development of the contribution rates, and certain financial statement disclosure information.

Under Indiana statutes, employer contribution rates are adopted annually for each Plan by the Board. These rates are actuarially determined based on the Board's funding policy and adopted actuarial assumptions. Contribution rates determined by the actuarial valuation become effective either twelve or eighteen months after the valuation date, depending on the applicable employer. For example, the rates determined by the June 30, 2011 actuarial valuation and adopted by the Board will become effective on either July 1, 2012 or January 1, 2013. If new legislation is enacted between the valuation date and the date the contribution rates become effective, the Board may adjust the recommended rates before adopting them, in order to reflect this new legislation. Such adjustments are based on information supplied by the actuary.

Financing Objectives and Funding Policy
In setting the contribution rates, the Board's principal objectives have been:

- To set contribution rates such that the unfunded actuarial accrued liability ("UAAL") will be amortized over a 30-year period.
- To set contribution rates such that they remain relatively level over time.

To accomplish this, the Board's funding policy requires that the employer contribution rate be equal to the sum of the employer normal cost rate (which pays the current year cost) and an amortization rate which results in the amortization of the UAAL in equal installments.

At the December 16, 2011 meeting, the Board resolved to discontinue the use of contribution rate smoothing rules previously employed for the Public Employees' Retirement Fund, the State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan, the 1977 Police Officers' and Firefighters' Pension and Disability Fund, and the Prosecuting Attorneys' Retirement Fund. For political subdivisions participating in the Public Employees' Retirement Fund, a systematic method for migrating all employers to a single contribution rate was adopted.

No membership growth is anticipated in setting the contribution rate. This is consistent with GASB #25, which prohibits anticipating membership growth in determining the minimum Annual Required Contribution ("ARC").

Progress Toward Realization of Financing Objectives
The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a Plan's funded status. In the absence of benefit improvements, it should increase over time, until it reaches 100%. The combined funded ratio for all Plans decreased by 2.7% from the preceding year to 83.4%, primarily due to the delayed recognition of asset losses from 2008 - 2009 in the Actuarial Value of Assets, partially offset by asset gains since such time and changes to some of the actuarial assumptions pursuant to the experience study.

Benefit Provisions
The benefit provisions reflected in the valuation reports are those which were in effect at June 30, 2011, as set forth in the related Indiana statutes. None of the Plans had any material changes in benefit provisions since the 2010 valuation.

Assets and Member Data
The valuations were based on asset values of the trust funds and member census data as of June 30, 2011. All asset and member data was provided by INPRS. While certain checks for reasonableness were performed, the data was used unaudited. The accuracy of the results presented in the reports is dependent upon the accuracy and completeness of the underlying asset and census information.

Actuarial Assumptions and Methods
The actuarial assumptions used in the June 30, 2011 valuations were adopted by the Board pursuant to the Experience Studies of September 2011, which reflect the experience period from July 1, 2005 and June 30, 2010. The actuarial assumptions for interest rate, COLA, and amortization method were approved by the Board in September 2010 for use in the 2010 valuations. The actuarial assumptions and methods are summarized in the Actuarial Assumptions and Methods section of each valuation report. The actuarial assumptions and methods are reasonable for the purposes of the valuation reports and comply with the parameters set forth in Statements No. 25 and No. 27 of the Governmental Accounting Standards Board ("GASB"). Different assumptions and methods may be reasonable for other purposes. As such, the results presented in the valuation reports should only be relied upon for the intended purpose.

Certification
We certify that the information presented herein is accurate and fairly portrays the actuarial position of each Plan administered by INPRS as of June 30, 2011.

This report contains the required accounting information to be included in the Comprehensive Annual Financial Report. This information has been prepared in accordance with our understanding of Governmental Accounting Standards No. 25 and No. 27 (as amended by No. 50).

To the best of our knowledge this actuarial statement is complete and accurate and has been prepared in accordance with generally accepted actuarial principles and practice and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of Indiana state law. The undersigned actuaries are members of the Society of Actuaries and other professional organizations, including the American Academy of Actuaries, and meet the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States relating to pension plans. There is no relationship between PwC and INPRS that may impair our objectivity.

This document was not intended or written to be used, and it cannot be used, for the purpose of avoiding U.S. federal, state, or local tax penalties. This includes penalties that may apply if the transaction that is the subject of this document is found to lack economic substance or fails to satisfy any other similar rule of law. This document has been prepared pursuant to an engagement letter between INPRS and PwC, and is intended solely for the use and benefits of INPRS and not for reliance by any other person.

Respectfully submitted,

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HIGHLIGHTS OF THE ACTUARY'S REPORT

This report presents the results of the actuarial valuation of the 1977 Police Officers' and Firefighters' Pension and Disability Fund (the "1977 Fund") and has been prepared to present the current funded status of the Plan, contribution requirements for calendar year 2013 (January 1, 2013 through December 31, 2013), and certain financial statement disclosure information. The valuation was performed using census data for plan members as of as of June 30, 2011 provided by INPRS, asset information as of June 30, 2011 provided by INPRS, the actuarial assumptions and methods approved by the Board and summarized in Section V, and the plan provisions effective June 30, 2011 as summarized in Section VI.

Contribution Rate

The 1977 Fund contribution rate is 19.7% for calendar year 2013, the same as the prior year. The contribution rate determined by the June 30, 2011 valuation becomes effective on January 1, 2013. Therefore, the actual dollar amount of employer cost will depend on the actual payroll during calendar year 2013.

At the December 16, 2011 meeting, the Board resolved to discontinue the use of the contribution rate smoothing rules. Beginning with the June 30, 2011 valuation, the Board will set, at its discretion, the applicable contribution rate upon considering the results of the actuarial valuation and other actuarial analysis as appropriate.

Employees covered by the 1977 Fund contribute 6% of the compensation of a first class officer during their first 32 years of service. However, the employer may elect to "pick-up" all or part of the employee contribution. If a member terminates employment with less than 20 years of service, the accumulated contributions with interest can be withdrawn as a lump sum or the member may direct the 1977 Fund to make a direct rollover of the distribution amount. When a member becomes vested with at least 20 years of service, the member's account balance may not be refunded and is instead combined with the employer contributions in order to fund the member's future retirement annuity benefit.

Funded Status

The funded status of the 1977 Fund is measured by the funded ratio, which is the ratio of the assets available for benefits to a benefit liability measure for the 1977 Fund. While there are several such measures that could be appropriately used, the benefit liability measure that ties most closely to INPRS's funding strategy is the Actuarial Accrued Liability (“AAL”).

Using the Actuarial Value of Assets ("AVA"), an asset value that smoothes the market gains and losses over four (4) years, the 1977 Fund AAL funded ratio increased from 92.7% at June 30, 2010 to 98.8% at June 30, 2011. The increase is primarily due to the net effect of changes to the retirement, withdrawal, disability, dependent and future salary increase assumptions, which decreased the AAL.

Investment Experience

On a Market Value basis, from June 30, 2010 to June 30, 2011, the 1977 Fund experienced an approximate investment return of 19.1%. However, on an Actuarial Value basis over the same time period, the 1977 Fund experienced an approximate investment return of 3.5%. The lower investment return on the AVA can be attributed to the smoothing of net prior losses that offset the gain on Market Value from June 30, 2010 to June 30, 2011.

HIGHLIGHTS OF THE ACTUARY'S REPORT (CONTINUED)

Cost-of-Living Adjustment

Benefits for retired members are increased annually based on increases in the CPI-U index. The increase is subject to a 3% maximum and 0% minimum. There was a 2.1% increase in monthly benefits provided to retired members, disabled members, and beneficiaries effective July 1, 2011. There was a 2.4% increase in monthly benefits provided to retired members, disabled members, and beneficiaries effective July 1, 2010.

Changes in Actuarial Assumptions

For the June 30, 2011 valuation, the Board approved the following assumption changes:

- The retirement assumption rates changed from age-based to age and service-based rates, to reflect the service cap in the benefit formula and reflect recent experience.

- The termination assumption rates changed from age-based to service-based rates and slightly increased to reflect recent experience.

- The disability assumption rates were adjusted to reflect recent experience.

- The marriage assumption changed from 90% of members assumed to be married or to have a dependent beneficiary, to 80% of male members and 50% of female members assumed to be married or to have a dependent beneficiary. The age difference assumption changed from males assumed to be three (3) years older than females and females assumed to be three (3) years younger than males, to males assumed to be three (3) years older than females and females assumed to be the same age as males.

- The future salary increases assumption changed from 4.00% per year, to 3.25% per year.

Changes in Plan Provisions

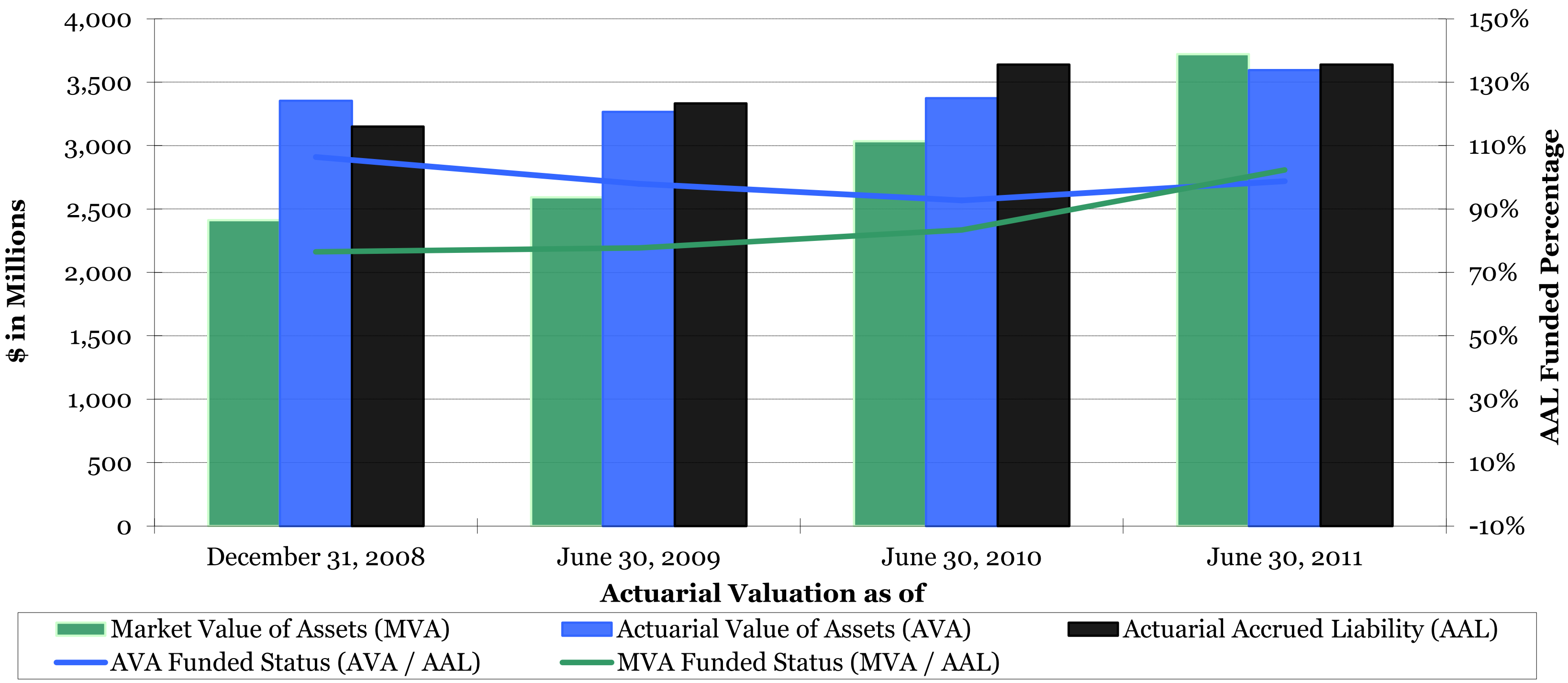
There have been no changes in the plan provisions since the June 30, 2010 valuation.

Changes in Actuarial Methods

At the December 16, 2011 meeting, the Board resolved to discontinue the use of the contribution rate smoothing rules.

HISTORICAL SUMMARY

1977 Fund – 4 Year History of Funded Status [1]



Actuarial Valuation as of:	December 31, 2008	June 30, 2009	June 30, 2010	June 30, 2011
Actuarial Accrued Liability (AAL)	$3,150.8	$3,332.7	$3,639.7	$3,639.0
Actuarial Value of Assets (AVA)	3,352.7	3,265.6	3,374.4	3,593.8
Market Value of Assets (MVA)	2,410.8	2,591.7	3,033.3	3,721.4
Unfunded Liability (AAL - AVA)	(201.9)	67.1	265.3	45.2
AVA Funded Status (AVA / AAL)	106.4%	98.0%	92.7%	98.8%
MVA Funded Status (MVA / AAL)	76.5%	77.8%	83.3%	102.3%

[1] Valuation results prior to June 30, 2010 were calculated by the prior actuary.

HISTORICAL SUMMARY (CONTINUED)

Summary of Valuation Results [1]

	December 31, 2008	June 30, 2009	June 30, 2010	June 30, 2011
Development of True Rate [2]				
Normal Cost (Beginning of Year)	$ 150,228,277	$ 148,391,864	$ 154,421,923	$ 123,438,234
Amortization of Unfunded Actuarial Accrued Liability	(15,551,625)	5,168,095	20,029,260	3,671,206
Interest Adjustment [3]	4,882,029	5,566,549	-	-
Employee Contributions	(38,618,413)	(38,547,232)	(40,547,846)	(40,582,006)
Total Contribution Amount	$ 100,940,268	$ 120,579,276	$ 133,903,337	$ 86,527,434
True Contribution Rate	15.7%	18.6%	19.8%	12.6%
Approved Funding Rate [2]				
Approved Contribution Rate [4]	19.5%	19.5%	19.7%	19.7%
Estimated Contribution Amount [5]	$ 125,762,540	$ 126,558,452	$ 133,132,094	$ 142,060,854

[1] Valuation results prior to June 30, 2010 were calculated by the prior actuary.

[2] The rates and contribution amounts shown were developed on a funding basis only and do not reflect accounting requirements.

[3] Valuation results prior to June 30, 2010 included an interest adjustment to the middle of the year because the payroll used for computing contribution rates was not discounted to the beginning of the year.

[4] The Employer Contribution Rates shown are based on the first class officer payroll as of June 30, 2011.

[5] Estimated Contribution Amounts prior to June 30, 2011 are based on actual payroll as of the valuation date. Estimated Contribution Amount for June 30, 2011 is based on projected payroll to the date contribution rates go into effect. The contribution rate determined by the June 30, 2011 valuation becomes effective on January 1, 2013. The actual dollar amount of employer cost will depend on the actual payroll during calendar year 2013.

HISTORICAL SUMMARY (CONTINUED)

Summary of Valuation Results (Continued) [1]

	December 31, 2008	June 30, 2009	June 30, 2010	June 30, 2011
Census Information				
Active				
Number	13,095	13,184	13,362	13,376
Average Age		40.2	40.6	41.1
Average Years of Service		13.1	13.1	13.6
Covered Payroll of Actives [2]	$ 644,936,101	$ 649,017,701	$ 675,797,434	$ 687,342,353
Inactive - Vested				
Number	122	108	111	126
Average Age			49.8	50.2
Average Years of Service			22.3	22.8
Inactive - Non-Vested [3]				
Number			771	791
Retiree/Beneficiary/Disabled				
Number	2,530	2,608	2,782	2,966
Average Age			61.3	61.5
Annual Benefits Payable	$ 53,588,258	$ 55,564,149	$ 60,220,091	$ 68,178,739

[1] Valuation results prior to June 30, 2010 were calculated by the prior actuary.

[2] For the 1977 Fund, payroll is the applicable first class officer pay for each member.

[3] For June 30, 2011, inactive non-vested members entitled to a refund of their ASA account have balances totaling $6,274,779.

HISTORICAL SUMMARY (CONTINUED)

Summary of Valuation Results (Continued) [1]

	December 31, 2008	June 30, 2009	June 30, 2010	June 30, 2011
Actuarial Accrued Liability (AAL)				
ASA Account Balance	$ 534,303,000	$ 571,534,000	$ 634,864,721	$ 679,848,776
Retiree/Beneficiary/Disabled	765,909,426	793,166,894	859,626,595	970,676,496
Active and Inactive	1,850,614,597	1,967,984,639	2,145,177,957	1,988,431,007
Total	$ 3,150,827,023	$ 3,332,685,533	$ 3,639,669,273	$ 3,638,956,279
Actuarial Value of Assets (AVA)				
ASA Account Balance	$ 534,303,000	$ 571,534,000	$ 634,864,721	$ 679,848,776
Retiree/Beneficiary/Disabled	765,909,426	793,166,894	859,626,595	970,676,496
Active and Inactive	2,052,493,012	1,900,896,680	1,879,946,523	1,943,261,593
Total	$ 3,352,705,438	$ 3,265,597,574	$ 3,374,437,839	$ 3,593,786,865
Market Value of Assets (MVA)				
ASA Account Balance	$ 534,303,000	$ 571,534,000	$ 634,864,721	$ 679,848,776
Retiree/Beneficiary/Disabled	765,909,426	793,166,894	859,626,595	970,676,496
Active and Inactive	1,110,575,197	1,226,972,637	1,538,793,947	2,070,841,180
Total	$ 2,410,787,623	$ 2,591,673,531	$ 3,033,285,263	$ 3,721,366,452
Unfunded Actuarial Accrued Liability: AAL - AVA				
ASA Account Balance	$ -	$ -	$ -	$ -
Retiree/Beneficiary/Disabled	-	-	-	-
Active and Inactive	(201,878,415)	67,087,959	265,231,434	45,169,414
Total	$ (201,878,415)	$ 67,087,959	$ 265,231,434	$ 45,169,414
Funded Percentage				
ASA Account Balance	100.0%	100.0%	100.0%	100.0%
Retiree/Beneficiary/Disabled	100.0%	100.0%	100.0%	100.0%
Active and Inactive	110.9%	96.6%	87.6%	97.7%
Total	106.4%	98.0%	92.7%	98.8%
Summary of Assumptions				
Valuation Interest Rate	7.25%	7.25%	7.0%	7.0%
Salary Scale	4.0%	4.0%	4.0%	3.25%
Cost-of-Living Assumption	2.75%	2.75%	2.25%	2.25%

[1] Valuation results prior to June 30, 2010 were calculated by the prior actuary.

FUNDING

A. Development of Funded Status

		June 30, 2010	June 30, 2011
1.	Actuarial Accrued Liability		
	a. Annuity Savings Account	634,864,721	679,848,776
	b. Retirees, Beneficiaries, and Disableds	859,626,595	970,676,496
	c. Actives and Inactives	2,145,177,957	1,988,431,007
	d. Total: (1)(a) + (1)(b) + (1)(c)	$ 3,639,669,273	$ 3,638,956,279
2.	Actuarial Value of Assets		
	a. Annuity Savings Account	634,864,721	679,848,776
	b. Retirees, Beneficiaries, and Disableds	859,626,595	970,676,496
	c. Actives and Inactives	1,879,946,523	1,943,261,593
	d. Total: (2)(a) + (2)(b) + (2)(c)	$ 3,374,437,839	$ 3,593,786,865
3.	Unfunded Actuarial Accrued Liability		
	a. Annuity Savings Account: (1)(a) - (2)(a)	-	-
	b. Retirees, Beneficiaries, and Disableds: (1)(b) - (2)(b)	-	-
	c. Actives and Inactives: (1)(c) - (2)(c)	265,231,434	45,169,414
	d. Total: (1)(d) - (2)(d)	$ 265,231,434	$ 45,169,414
4.	Funded Percentage		
	a. Annuity Savings Account: (2)(a) / (1)(a)	100.0%	100.0%
	b. Retirees, Beneficiaries, and Disableds: (2)(b) / (1)(b)	100.0%	100.0%
	c. Actives and Inactives: (2)(c) / (1)(c)	87.6%	97.7%
	d. Total: (2)(d) / (1)(d)	92.7%	98.8%

B. Unfunded Actuarial Accrued Liability Reconciliation [1]

		June 30, 2010	June 30, 2011
1.	Unfunded Actuarial Accrued Liability, Prior Year	$ 67,087,959	$ 265,231,434
2.	Unfunded Actuarial Accrued Liability (Gain) / Loss		
	a. Actuarial Value of Assets Experience	$ 225,027,081	$ 125,319,767
	b. Actuarial Accrued Liability Experience	(38,816,236)	(82,611,060)
	c. Additional Liability Due to Transition from Prior Actuary	(36,487,301)	-
	d. Additional Liability Due to Changes in Actuarial Assumptions	49,098,836	(259,905,620)
	e. Additional Liability Due to Changes in Plan Provisions	-	-
	f. Total New Amortization Bases: (2)(a) + (2)(b) + (2)(c) + (2)(d) + (2)(e)	$ 198,822,380	$ (217,196,913)
	g. Amortization of Existing Bases	(678,905)	(2,865,107)
	h. Change in Unfunded Actuarial Accrued Liability: (2)(f) + (2)(g)	$ 198,143,475	$ (220,062,020)
3.	Unfunded Actuarial Accrued Liability, Current Year: (1) + (2)(h)	$ 265,231,434	$ 45,169,414

[1] Valuation results prior to June 30, 2010 were calculated by the prior actuary.

C. Actuarial Accrued Liability Reconciliation

1.	June 30, 2010 Actuarial Accrued Liability	$	3,639,669,273	
2.	Normal Cost		154,421,923	
3.	Actual Benefit Payments		75,560,020	
4.	Interest of 7.00% on (1) + (2) - (3)/2		262,941,783	
5.	Expected June 30, 2011 Actuarial Accrued Liability: (1) + (2) - (3) + (4)	$	3,981,472,959	
			Dollar Change in Liability	Percent Change in Liability
6.	(Gain)/Loss Components			
	a. Census	$	(82,611,060)	(2.1%)
	b. Assumption Changes		(259,905,620)	(6.5%)
	c. Total: (6)(a) + (6)(b)	$	(342,516,680)	(8.6%)
7.	Actual June 30, 2011 Actuarial Accrued Liability: (5) + (6)(c)	**$**	**3,638,956,279**	

D. Reconciliation of Market Value of Assets

		June 30, 2010	June 30, 2011
1.	Market Value of Assets, Prior June 30	$ 2,591,673,531	$ 3,033,285,263
2.	Receipts		
a.	Employer Contributions	$ 130,774,507	$ 133,726,466
b.	Employee Contributions	39,826,023	40,532,031
c.	Investment Income and Dividends Net of Fees	335,799,829	589,417,267
d.	Security Lending Income Net of Fees	1,966,364	1,989,742
e.	Net Transfers In	236,919	-
f.	Miscellaneous Income	89,877	83,138
g.	Total Receipts: (2)(a) + (2)(b) + (2)(c) + (2)(d) + (2)(e) + (2)(f)	$ 508,693,519	$ 765,748,644
3.	Disbursements		
a.	Benefits Paid During the Year	$ 62,913,046	$ 72,837,039
b.	Refund of Contributions and Interest	2,304,357	2,662,048
c.	Administrative Expenses	1,864,384	2,107,435
d.	Net Transfers Out	-	60,933
e.	Miscellaneous Disbursements	-	-
f.	Total Disbursements: (3)(a) + (3)(b) + (3)(c) + (3)(d) + (3)(e)	$ 67,081,787	$ 77,667,455
4.	Market Value of Assets, Current June 30: (1) + (2)(g) - (3)(f)	**$ 3,033,285,263**	**$ 3,721,366,452**
5.	Market Value of Assets Approximate Annual Rate of Investment Return	12.7%	19.1%

E. Reconciliation of Actuarial Value of Assets

1.	Market Value of Assets, June 30, 2010				$	3,033,285,263
2.	Market Value of Assets, June 30, 2011					3,721,366,452
3.	Expected Earnings/Expenses					
	a. Expected Investment Earnings at 7.00% on June 30, 2010 Market Value					212,329,968
	b. Receipts and Expected Investment Earnings at 7.00%					180,443,592
	c. Disbursements and Expected Investment Earnings at 7.00%					78,204,621
4.	Expected Assets, June 30, 2011: (1) + (3)(a) + (3)(b) - (3)(c)				$	3,347,854,202
5.	2010-2011 Gain/(Loss): (2) - (4)					373,512,250
6.	Smoothing of Gain/(Loss)					
		Year	Gain/(Loss)	% Unrecognized		
	a.	2010-2011	$ 373,512,250	75%		280,134,188
	b.	2009-2010	$ 144,173,493	50%		72,086,747
	c.	2008-2009	$ (898,565,391)	25%		(224,641,348)
7.	Preliminary Actuarial Value of Assets, June 30, 2011: (2) - (6)(a) - (6)(b) - (6)(c)				$	3,593,786,865
8.	Corridor					
	a. 120% of Market Value					4,465,639,742
	b. 80% of Market Value					2,977,093,161
9.	Actuarial Value of Assets, June 30, 2011				**$**	**3,593,786,865**
10.	Actuarial Value of Assets as a Percent of Market Value: (9) / (2)					96.6%
11.	Actuarial Value of Assets Approximate Annual Rate of Investment Return					3.5%

F. Contribution Rate

		June 30, 2010	June 30, 2011
Development of Annual Required Contribution:			
1.	Current Payroll [1]	$ 675,797,434	$ 687,342,353
2.	Normal Cost (Beginning of Year)		
	a. Amount	$ 154,421,923	$ 123,438,234
	b. Percentage of Payroll	22.85%	17.96%
3.	Unfunded Actuarial Accrued Liability (UAAL) Annual Amortizations		
	a. Amount	$ 20,029,260	$ 3,671,206
	b. Percentage of Payroll	2.96%	0.53%
4.	Expected Employee Contributions [2]		
	a. Amount	$ 40,547,846	$ 40,582,006
	b. Percentage of Payroll	6.00%	5.90%
5.	Annual Required Contribution Rate (True Rate, Before Smoothing): (2)(b) + (3)(b) - 4(b)	**19.81%**	**12.59%**
6.	Estimated Annual Required Contribution		
	a. Fiscal Year Beginning	January 1, 2012	January 1, 2013
	b. Anticipated Payroll: (1) x [(1 + Salary Increase)^1.5]	$ 716,748,095	$ 721,121,088
	c. Amount: (5) x (6)(b) [3]	**$ 141,987,798**	**$ 90,789,145**
Development of Funding Rate:			
7.	Prior Year Actual Rate	19.50%	
8.	Difference between True Rate and Prior Year Actual Rate: (5) - (7)	0.31%	
9.	If increase, one-half of difference in (8); if decrease, excess of (8) over 1.0%; rounded up to nearest tenth percent	0.20%	
10.	Smoothed Rate: [(7) + (9), not less than (7)]	19.70%	
Approved Funding Rate:		**19.70%**	**19.70%**

[1] For the 1977 Fund, payroll is the applicable first class officer pay for each member.
[2] Only members with less than 32 years of service contribute to the plan. Current payroll for active members with less than 32 years of service as of June 30, 2011 is $676,366,767.
[3] Since the contribution rate becomes effective one and a half years after the valuation date, the Annual Required Contribution Amount is estimated by assuming payroll will increase 3.25% (4.0% as of June 30, 2010) per year and then applying the Annual Required Contribution Rate computed at the valuation date.

G. Unfunded Actuarial Accrued Liability Amortization Schedule [1]

	Date Base Established	Reason	Remaining Unfunded	Remaining Period	Amortization Amount
1.	6/30/2009	Actuarial Experience	$ 65,648,760	28	$ 5,055,073
2.	6/30/2010	Actuarial Experience and Changes in Actuarial Assumptions	196,717,567	29	14,974,187
3.	6/30/2011	Actuarial Experience and Changes in Actuarial Assumptions	(217,196,913)	30	(16,358,054)
	Total		$ 45,169,414		$ 3,671,206

[1] Valuation results prior to June 30, 2010 were calculated by the prior actuary.

H. History of Employer Contribution Rates [1, 2]

1. Valuation Date	2. Effective Date	3. Contribution Rate
December 31, 2007	July 1, 2009	19.5%
December 31, 2008	July 1, 2010	19.5%
June 30, 2009	January 1, 2011	19.5%
June 30, 2010	January 1, 2012	19.7%
June 30, 2011	January 1, 2013	19.7%

[1] Valuation results prior to June 30, 2010 were calculated by the prior actuary.

[2] Prior to the June 30, 2011 valuation date, rates shown reflect application of the contribution rate smoothing rules.

I. Approximate Investment Return for Year Ending June 30, 2011

		Market Value of Assets	Actuarial Value of Assets
1.	Balance, beginning of year	$ 3,033,285,263	$ 3,374,437,839
2.	Balance, end of year	3,721,366,452	3,593,786,865
3.	Total increase: (2) - (1)	688,081,189	219,349,026
4.	Contributions and Transfers In	174,341,635	174,341,635
5.	Benefit payments and Transfers Out	75,560,020	75,560,020
6.	Net additions: (4) - (5)	98,781,615	98,781,615
7.	Net investment increase: (3) - (6)	589,299,574	120,567,411
8.	Average assets: [(1) + (2) - (7)] / 2	3,082,676,070	3,423,828,646
9.	Approximate rate of return: (7) / (8) [1]	19.1%	3.5%

J. Historical Investment Experience

1.	2.	3.	4.
	Approximate Annual Rate of Investment Return		Actuarial Assumed
Year Ending	Market Basis	Actuarial Basis	Interest Rate
December 31, 2001	(1.3%)	2.6%	7.50%
December 31, 2002	(8.9%)	(2.0%)	7.50%
December 31, 2003	24.2%	2.9%	7.25%
December 31, 2004	11.9%	4.9%	7.25%
December 31, 2005	7.8%	13.5%	7.25%
December 31, 2006	13.7%	15.5%	7.25%
December 31, 2007	6.3%	10.8%	7.25%
December 31, 2008	(30.8%)	(1.2%)	7.25%
June 30, 2009 [2]	(20.8%)	0.2%	7.25%
June 30, 2010	12.7%	0.1%	7.25%
June 30, 2011	19.1%	3.5%	7.00%

[1] Net of expenses.

[2] Figures shown are for the six-month period from January 1, 2009 to June 30, 2009.

ACCOUNTING

REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #25 AND #27

A. Assumptions and Methods Under GASB #25 and #27

Under the Governmental Accounting Standards Board (GASB) Statements No. 25 and No. 27, certain information about the plan is required to be disclosed. The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation Date	June 30, 2011
Actuarial Cost Method	Entry Age Normal (Level Percent of Payroll)
Amortization Method	Level Dollar
Amortization Period	30 Years, Closed
Actuarial Value of Assets	4-Year Smoothed Market Value with 20% Corridor
Actuarial Assumptions:	
Investment Rate of Return	7.0%
Future Salary Increases	3.25% (includes 3.0% wage inflation)
Cost-of-Living Increases	2.25% compounded annually

B. Membership Data

The plan consisted of the following membership as of June 30, 2011, the date of the latest actuarial valuation:

Retired members, beneficiaries and disabled members receiving benefits:	2,966
Terminated vested plan members entitled to but not yet receiving benefits:	126
Terminated non-vested plan members entitled to refund of ASA balance:	791
Active Plan Members:	13,376
Total membership:	17,259

REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #25 AND #27 (CONTINUED)

C. Statement of Plan Net Assets

1.	Assets				
	a.	Cash and Cash Equivalents		$	422,042,286
	b.	Securities Lending Collateral			-
	c.	Receivables			
		i.	Contributions Receivable	$	43,171,651
		ii.	Accrued Investment Income		11,203,147
		iii.	Receivables for Investment Securities		141,230,266
		iv.	Member Loans		-
		v.	Miscellaneous Receivables		116,744
		vi.	Due From Other Governmental Plans		-
		vii.	Due From Other Funds		-
		viii.	Total Receivables	$	195,721,808
	d.	Investments			
		i.	Debt Securities	$	970,582,496
		ii.	Equity Securities		1,483,960,897
		iii.	Mutual Funds		172,175,470
		iv.	Other Investments		752,243,636
		v.	Total Investments	$	3,378,962,499
	e.	Capital Assets			-
	f.	Total Assets: (1)(a) + (1)(b) + (1)(c)(viii) + (1)(d)(v) + (1)(e)		$	3,996,726,593
2.	Liabilities				
	a.	Accounts Payable		$	107,779
	b.	Salaries and Benefits Payable			-
	c.	Investments Payable			252,567,364
	d.	Securities Lending Collateral			-
	e.	Due To Other Governmental Plans			-
	f.	Due To Other Funds			22,684,998
	g.	Total Current Liabilities		$	275,360,141
	h.	Compensated Absences - Long Term			-
	i.	Total Liabilities: (2)(a) + (2)(b) + (2)(c) + (2)(d) + (2)(e) + (2)(f) + (2)(g) + (2)(h)		$	275,360,141
3.	Net Assets Held in Trust for Pension Benefits: (1)(f) - (2)(i)			**$**	**3,721,366,452**

REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #25 AND #27 (CONTINUED)

D. Statement of Changes in Plan Net Assets

1.	Net Assets as of June 30, 2010		$	3,033,285,263
2.	Revenue (Additions)			
	a.	Contributions		
		i. Member Contributions	$	40,532,031
		ii. Employer Contributions		133,726,466
		iii. Other Contributions		-
		iv. Total Contributions	$	174,258,497
	b.	Investment Income/Loss		
		i. Investment Income/Loss	$	610,443,578
		ii. Securities Lending Income		2,649,426
		iii. Securities Lending Expenses		(659,685)
		iv. Other Investment Expenses		(21,026,310)
		v. Net Investment Income	$	591,407,009
	c.	Other Additions		
		i. Intergovernmental Transfers	$	-
		ii. Miscellaneous Income		83,138
		iii. Total Other Additions	$	83,138
	d.	Total Revenue (Additions): (2)(a)(iv) + (2)(b)(v) + (2)(c)(iii)	$	765,748,644
3.	Expenses (Deductions)			
	a.	Pension and Disability Benefits	$	72,213,039
	b.	Death, Survivor, and Funeral Benefits		624,000
	c.	Distributions of Contributions and Interest		2,662,048
	d.	Intergovernmental Transfers		60,933
	e.	Pensions Relief Distributions		-
	f.	Local Unit Withdrawals		-
	g.	Administrative Expenses		2,107,435
	h.	Total Expenses (Deductions): (3)(a) + (3)(b) + (3)(c) + (3)(d) + (3)(e) + (3)(f) + (3)(g)	$	77,667,455
4.	Changes in Net Assets Held in Trust for Pension Benefits: (2)(d) - (3)(h)		$	688,081,189
5.	Net Assets as of June 30, 2011: (1) + (4)		**$**	**3,721,366,452**

REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #25 AND #27 (CONTINUED)

E. Schedule of Funding Progress [1]

($ in Thousands)

1. Actuarial Valuation Date	2. Actuarial Value of Assets	3. Actuarial Accrued Liability (AAL)	4. Unfunded Actuarial Accrued Liability (UAAL)	5. AAL Funded Ratio	6. Current Payroll [2]	7. UAAL as a % of Payroll
			(3) - (2)	(2) / (3)		(4) / (6)
12/31/2005	$ 2,347,986	$ 2,415,053	$ 67,067	97.2%	$ 522,227	12.8%
12/31/2006	2,860,512	2,649,525	(210,987)	108.0%	557,644	(37.8%)
12/31/2007	3,281,480	2,889,295	(392,185)	113.6%	603,963	(64.9%)
12/31/2008	3,352,705	3,150,827	(201,878)	106.4%	644,936	(31.3%)
6/30/2009	3,265,598	3,332,686	67,088	98.0%	649,018	10.3%
6/30/2010	3,374,438	3,639,669	265,231	92.7%	675,797	39.2%
6/30/2011	3,593,787	3,638,956	45,169	98.8%	687,342	6.6%

F. Schedule of Employer Contributions [1]

($ in Thousands)

1. Plan Year Ending	2. Annual Required Contribution (ARC)	3. Actual Employer Contribution	4. % of ARC
			(3) / (2)
12/31/2005	$ 97,286	$ 108,768	111.8%
12/31/2006	102,964	143,272	139.1%
12/31/2007	108,741	122,712	112.7%
12/31/2008	117,773	133,196	112.6%
6/30/2009	62,881 [3]	64,285	102.2%
6/30/2010	126,558	130,775	103.3%
6/30/2011	133,903	133,726	99.9%

[1] Valuation results prior to June 30, 2010 were calculated by the prior actuary.

[2] For the 1977 Fund, payroll is the applicable first class officer pay for each member.

[3] Equal to one-half of annual cost determined as of December 31, 2008.

REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #25 AND #27 (CONTINUED)

G. Development of Net Pension Obligation (NPO) [1]

($ in Thousands)

1. Plan Year Ending	2. Annual Required Contribution (ARC)	3. Interest on NPO at Discount Rate	4. ARC Adjustment (9) / (5)	5. Amortization Factor	6. Net Pension Cost (NPC) (2) + (3) - (4)	7. Actual Employer Contribution	8. Change in NPO (6) - (7)	9. NPO at Beginning of Year	10. NPO at End of Year (8) + (9)
12/31/2008	$ 117,773	$ (4,091)	$ (4,662)	12.1037	$ 118,344	$ 133,196	$ (14,852)	$ (56,432)	$ (71,284)
6/30/2009 [2]	62,881	(2,584)	(2,945)	12.1037	63,242	64,285	(1,043)	(71,284)	(72,327)
6/30/2010	126,558	(5,244)	(5,976)	12.1037	127,290	130,775	(3,485)	(72,327)	(75,812)
6/30/2011	133,903	(5,307)	(6,109)	12.4090	134,705	133,726	979	(75,812)	(74,833)

H. Three-Year Trend Information [1]

($ in Thousands)

1. Plan Year Ending	2. Net Pension Cost (NPC)	3. Actual Employer Contribution	4. % of NPC (3) / (2)
12/31/2008	$ 118,344	$ 133,196	112.6%
6/30/2009 [2]	63,242	64,285	101.6%
6/30/2010	127,290	130,775	102.7%
6/30/2011	134,705	133,726	99.3%

[1] Valuation results prior to June 30, 2010 were calculated by the prior actuary.

[2] Calculations adjusted for short plan year (January 1, 2009 to June 30, 2009).

I. Solvency Test [1]

Portion of Actuarial Liability Provided by Assets
($ in Thousands)

1. As of	2. ASA Balances	3. Retired and Beneficiaries	4. Non-Retired Members (Employer Financed Portion)	5. Total Actuarial Accrued Liabilities	6. Actuarial Value of Assets
12/31/2004	$ 362,908	$ 436,606	$ 1,264,657	$ 2,064,171	$ 1,976,905
	100.0%	100.0%	93.1%	95.8%	
12/31/2005	403,643	503,498	1,507,912	2,415,053	2,347,986
	100.0%	100.0%	95.6%	97.2%	
12/31/2006	455,476	546,628	1,647,421	2,649,525	2,860,512
	100.0%	100.0%	100.0%	108.0%	
12/31/2007	498,662	655,827	1,734,806	2,889,295	3,281,480
	100.0%	100.0%	100.0%	113.6%	
12/31/2008	534,303	765,909	1,850,615	3,150,827	3,352,705
	100.0%	100.0%	100.0%	106.4%	
6/30/2009	571,534	793,167	1,967,985	3,332,686	3,265,598
	100.0%	100.0%	96.6%	98.0%	
6/30/2010	634,865	859,626	2,145,178	3,639,669	3,374,438
	100.0%	100.0%	87.6%	92.7%	
6/30/2011	679,849	970,676	1,988,431	3,638,956	3,593,787
	100.0%	100.0%	97.7%	98.8%	

[1] Valuation results prior to June 30, 2010 were calculated by the prior actuary.

SECTION IV - CENSUS DATA

CENSUS DATA

A. Reconciliation of Participant Data

	Actives	Inactive Non-Vested ASA Balance	Inactive Vested	Disabled	Retired	Beneficiary	Total
Total as of June 30, 2010	13,362	771	111	671	1,572	539	17,026
New Entrants	354	29	-	-	-	-	383
Rehires	81	(78)	(2)	(1)	-	-	-
Non-Vested Terminations	(148)	148	-	-	-	-	-
Vested Terminations	(35)	(2)	37	-	-	-	-
Retirements	(158)	(1)	(18)	(6)	183	-	-
Disablements	(26)	(1)	-	27	-	-	-
Death with Beneficiary	(9)	-	-	(5)	(17)	31	-
Death without Beneficiary	(1)	-	-	(2)	(18)	(13)	(34)
Refunds	(38)	(72)	(1)	-	-	-	(111)
Data Adjustments	(6)	(3)	(1)	1	3	1	(5)
Total as of June 30, 2011	13,376	791	126	685	1,723	558	17,259

B. Census Information

		June 30, 2010	June 30, 2011
1.	Active		
	a. Number	13,362	13,376
	b. Average Age	40.6	41.1
	c. Average Years of Service	13.1	13.6
	d. Covered Payroll of Actives [1]	$ 675,797,434	$ 687,342,353
2.	Inactive - Vested		
	a. Number	111	126
	b Average Age	49.8	50.2
	c. Average Years of Service	22.3	22.8
3.	Inactive - Non-Vested [2]		
	a. Number		791
4.	Retiree/Beneficiary/Disabled		
	a. Number	2,782	2,966
	b. Average Age	61.3	61.5
	c. Annual Benefits Payable	$ 60,220,091	$ 68,178,739

[1] For the 1977 Fund, payroll is the applicable first class officer pay for each member.

[2] For June 30, 2011, inactive non-vested members entitled to a refund of their ASA balances totaling $6,274,779.

C. Schedule of Active Member Valuation Data [1]

1. As of	2. Active Members	3. Annual Payroll ($ in Thousands)	4. Average Pay [2] (3) / (2)	5. Annual Percent Increase
12/31/2004	11,424	$ 493,707	$ 43,217	3.4%
12/31/2005	11,728	522,227	44,528	3.0%
12/31/2006	12,056	557,644	46,254	3.9%
12/31/2007	12,611	603,963	47,892	3.5%
12/31/2008	13,095	644,936	49,251	2.8%
6/30/2009	13,184	649,018	49,228	(0.0%)
6/30/2010	13,362	675,797	50,576	2.7%
6/30/2011	13,376	687,342	51,386	1.6%

[1] Valuation results prior to June 30, 2010 were calculated by the prior actuary.

[2] For the 1977 Fund, payroll is the applicable first class officer pay for each member.

SECTION IV - CENSUS DATA

D. Schedule of Retirees, Beneficiaries, and Disabled Members [1]

1.	2.	3.	4.	5.	6.	7.	8.	9.
	Added		Removed		End of Year [2]			
Year Ending	Number	Annual Allowances ($ in Thousands)	Number	Annual Allowances ($ in Thousands)	Number	Annual Allowances ($ in Thousands)	% Increase in Annual Allowances	Average Annual Allowances
12/31/2004	14	$ 255	22	$ 387	1,898	$ 33,706	(1.5%)	$ 17,759
12/31/2005	257	5,493	28	554	2,127	38,648	14.7%	18,170
12/31/2006	172	3,860	34	592	2,265	41,973	8.6%	18,531
12/31/2007	333	8,101	50	886	2,548	49,537	18.0%	19,442
12/31/2008	255	5,861	273	4,565	2,530	53,588	8.2%	21,181
6/30/2009	102	2,571	24	479	2,608	55,564	3.7%	21,305
6/30/2010	208	4,918	34	641	2,782	60,220	8.4%	21,646
6/30/2011	218	6,179	34	609	2,966	68,179	13.2%	22,987

[1] Valuation results prior to June 30, 2010 were calculated by the prior actuary.

[2] End of year annual allowances are not equal to the prior end of year annual allowances plus additions and less removals because of reductions for beneficiary benefits, data changes, and cost-of-living increases.

E. Distribution of Active Members by Age and Service

Attained Age	Distribution of Active Members by Age and Service as of June 30, 2011										
	Under 1 year	1 to 4 years	5 to 9 years	10 to 14 years	15 to 19 years	20 to 24 years	25 to 29 years	30 to 34 years	35 to 39 years	Over 40 years	Total
<25	92	108									200
25-29	117	933	267								1,317
30-34	75	656	988	329							2,048
35-39	11	388	843	1,220	220	1					2,683
40-44	14	41	415	981	958	284					2,693
45-49		4	19	401	498	928	168				2,018
50-54		6	9	47	219	597	530	145			1,553
55-59				20	25	183	209	286			723
60-64			1	8	5	6	52	57	3		132
65-69					1	1		5			7
70&Above				1	1						2
Total	309	2,136	2,542	3,007	1,927	2,000	959	493	3		13,376

F. Distribution of Inactive Vested Members by Age and Service

Attained Age	Distribution of Inactive Vested Members by Age and Service as of June 30, 2011				
	Under 20 years	20 to 24 years	25 to 29 years	Over 30 years	Total
<25					
25-29					
30-34					
35-39					
40-44		7			7
45-49		63	2		65
50-54		31	9	2	42
55-59			1	7	8
60-64		2		1	3
65-69			1		1
70&Above					
Total		103	13	10	126

G. Distribution of Retired Members, Beneficiaries, and Disabled Members by Age and Number of Years Retired

Attained Age	Distribution of Retired Members, Beneficiaries, and Disabled Members by Age and Number of Years Retired as of June 30, 2011							
	Under 5 years	5 to 9 years	10 to 14 years	15 to 19 years	20 to 24 years	25 to 29 years	Over 30 years	Total
<40	41	25	23	8	7		1	105
40-44	34	23	12	8				77
45-49	39	46	30	16	2	2		135
50-54	241	46	36	25	15	10	1	374
55-59	445	202	53	44	13	10	2	769
60-64	119	147	125	56	42	25	4	518
65-69	17	22	203	50	29	17	5	343
70-74	1	1	54	188	24	27	6	301
75-79			14	47	72	9	3	145
80-84			4	33	42	29	5	113
85-89				6	22	23	15	66
90&Above			2	2	2	8	6	20
Total	937	512	556	483	270	160	48	2,966

H. Schedule of Benefit Recipient by Type of Benefit Option

Number of Benefit Recipients by Benefit Option as of June 30, 2011

Amount of Monthly Benefit	Retiree Single Life Annuity	Retiree 60% Joint and Survivor Annuity	Survivors	Disability	Total
$ 1 - 500	0	0	10	0	10
501 - 1,000	0	13	145	25	183
1,001 - 1,500	25	160	281	141	607
1,501 - 2,000	92	414	82	249	837
2,001 - 3,000	156	765	36	261	1,218
over 3,000	15	83	4	9	111
Total	288	1,435	558	685	2,966

I. Schedule of Average Benefit Payments as of June 30, 2011 [1]

	Years of Credited Service							
	0-4	5-9	10-14	15-19	20-24	25-29	30+	Total
Average Monthly Defined Benefit	$ 1,724	$ 1,700	$ 1,609	$ 1,636	$ 1,758	$ 2,206	$ 2,272	$ 1,916
Average Final Average Salary	$ 38,935	$ 41,313	$ 44,601	$ 43,597	$ 41,438	$ 44,731	$ 47,365	$ 43,362
Number of Benefit Recipients	85	156	208	264	1,102	755	396	2,966

[1] For some members average salary at retirement and years of credited service was not available. The average salary for each group excludes these members. Members with credited service information that is missing are counted in the "0-4" group.

ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions

The assumptions used in the valuation were selected and approved by the INPRS Board of Trustees. The demographic assumptions are reviewed every five years through a study of actual experience. In this way, the actuary provides guidance to the Board in selecting the assumptions. The actuary and other economic and investment professionals also provide advice to the Board for selecting the economic assumptions. In our opinion, the assumptions are reasonable for purposes of this valuation.

Interest Rate / Investment Return	7.0% (net of administrative and investment expenses)
Interest on Member ASA Balances	5.5% per year
Future Salary Increases	3.25% per year
Inflation	3.0% per year
Cost of Living Increases	2.25% per year in retirement
Mortality (Healthy and Disabled)	2008 IRS Static Mortality projected five (5) years with Scale AA
Disability	Based on 2005-2010 experience. Illustrative rates shown below:

Age	Rate
20	0.000%
25	0.075%
30	0.150%
35	0.200%
40	0.400%
45+	0.700%

A. Actuarial Assumptions (continued)

Termination

Based on 2005-2010 experience. Illustrative rates shown below:

Service	Rate	Service	Rate
0	40.0%	7-9	2.0%
1	20.0%	10-14	1.5%
2	5.0%	15-19	1.0%
3	4.0%	20+	1.5%
4	3.5%		
5	3.0%		
6	2.5%		

Retirement

Based on 2005-2010 experience. Illustrative rates shown below:

Ages	Service <32	Service >=32
45-51	10.0%	100.0%
52-57	10.0%	20.0%
58-61	15.0%	20.0%
62-64	20.0%	20.0%
65-69	50.0%	50.0%
70+	100.0%	100.0%

Decrement Timing

Decrements are assumed to occur at the beginning of the year.

Spouse/Beneficiary

80% of male members and 50% of female members are assumed to be married or to have a dependent beneficiary. Male members are assumed to be three (3) years older than females and female members are assumed to be the same age as males.

Disability Retirement

For members hired after 1989 that become disabled, impairments are assumed to be 45% Class 1 (at 65% of salary), 10% Class 2 (at 50% of salary), and 45% Class 3 (at 36% of salary).

A. Actuarial Assumptions (continued)

Pre-Retirement Death	Of active member deaths, 10% are assumed to be in the line of duty and 90% are other than in the line of duty. Additionally, all deaths among retired and disabled members are other than in line of duty.
Data Assumptions	Actives and inactives with either no date of birth and/or no gender are assumed to be age 41 and/or male. Spouse gender is assumed to be the opposite gender of the member. Retirees and disabled members that are not married and do not have a retirement option listed are assumed to elect a single life annuity. Retirees and disabled members that are married and do not have a retirement option listed are assumed to be receiving a 60% joint and survivor annuity. Beneficiaries that do not have a retirement option listed are assumed to receive monthly payments for life.
Changes in Assumptions	For the June 30, 2011 valuation, the Board approved the following assumption changes:

- The retirement assumption rates changed from age-based to age and service-based rates, to reflect the service cap in the benefit formula and reflect recent experience.

- The termination assumption rates changed from age-based to service-based rates and slightly increased to reflect recent experience.

- The disability assumption rates were adjusted to reflect recent experience.

- The marriage assumption changed from 90% of members assumed to be married or to have a dependent beneficiary, to 80% of male members and 50% of female members assumed to be married or to have a dependent beneficiary. The age difference assumption changed from males assumed to be three (3) years older than females and females assumed to be three (3) years younger than males, to males assumed to be three (3) years older than females and females assumed to be the same age as males.

- The future salary increases assumption changed from 4.00% per year, to 3.25% per year.

B. Actuarial Methods

The actuarial methods used in this valuation were selected and approved by the Board. In general, the methods provide orderly funding of all benefits being accrued, as well as unfunded past-service benefit liabilities, over a period of thirty years. However, the smoothing methods employed in determining the Actuarial Value of Assets may accelerate or lengthen the effective funding period, depending on whether gains or losses are experienced. In our opinion, the actuarial methods are reasonable for the purposes of this valuation.

1. Actuarial Cost Method

   The actuarial cost method is Entry Age Normal - Level Percent of Payroll.

   The normal cost is calculated separately for each active member and is equal to the level percentage of payroll needed as an annual contribution from entry age to retirement age to fund projected benefits. The actuarial accrued liability on any valuation date is the accumulated value of such normal costs from entry age to the valuation date.

   Gains and losses occurring from census experience different than assumed, assumption changes, and benefit changes are amortized over a 30-year period with level payments each year. A new gain or loss base is established each year based on the additional gain or loss during that year and that base is amortized over a new 30-year period. The purpose of the method is to give a smooth progression of the costs from year to year and, at the same time, provide for an orderly funding of the unfunded liabilities.

2. Asset Valuation Method

   Actuarial Value of Assets is equal to a four-year smoothing of gains and losses on the Market Value of Assets subject to a 20% corridor.

3. Changes in Actuarial Methods

   At the December 16, 2011 meeting, the Board resolved to discontinue the use of the contribution rate smoothing rules.

SECTION VI - SUMMARY OF PLAN PROVISIONS

SUMMARY OF PLAN PROVISIONS

SECTION VI - SUMMARY OF PLAN PROVISIONS

A. Summary of Plan Provisions

The benefit provisions for the 1977 Fund are set forth in IC 36-8-8. A summary of those defined pension benefit provisions is presented below:

Participation		All full-time, fully-paid police officers and firefighters who work for employers participating in the 1977 Fund and who are hired or rehired after April 30, 1977.
Eligibility for Defined Pension Benefits		
a.	Normal Retirement	Age 52 with 20 or more years of creditable service
b.	Early Retirement	Age 50 with 20 or more years of creditable service
c.	Late Retirement	Subject to continued employment after normal retirement
d.	Disability Retirement	As determined by a disability medical panel.
e.	Termination	20 or more years of creditable service and no longer active (i.e. vested inactive)
f.	Pre-Retirement Death	Immediate
Amount of Benefits		
a.	Normal Retirement	The retirement benefit valued was 50% of the base salary (first-class salary) of a First Class Police Officer and Firefighter with 20 years of service, plus an additional 1% for each completed 6 months of service over 20 years up to a maximum of 74% with 32 years of service.
b.	Early Retirement	Early retirement benefits are reduced by 7% per year for commencement between ages 50 and 52.
c.	Late Retirement	The late retirement benefit is calculated in the same manner as the normal retirement benefit. Creditable service and earnings earned after normal retirement is included in the computation.

A. Summary of Plan Provisions (continued)

Amount of Benefits (continued)

d. Disability Retirement

Hired Before 1990 This disability benefit is only available to members hired prior to January 1, 1990 and who do not choose to be covered by the disability benefit for members hired after 1989. The disability benefit is equal to the benefit the member would have received if the member had retired. If the member does not have 20 years of service or is not at least age 52 on the date of disability, the benefit is computed as if the member does have 20 years of service and is age 52 on the date of disability.

Hired after 1989 This disability benefit is for members hired after 1989, or hired prior to January 1, 1990, who have chosen to be covered by this disability benefit. The following describes the three different classes of impairments and the amount of base benefit for each class:

Class 1 Impairment:
A personal injury that occurs while on duty, while responding to an emergency, or due to an occupational disease. The disability benefit is equal to a base benefit of 45% of base salary, plus an additional amount between 10% and 45% of this salary based on degree of impairment. The benefit is payable for life, at which time the member is entitled to a retirement benefit based on the salary and service the member would have earned had the member remained in active service.

Class 2 Impairment:
A proven duty-related disease. The disability benefit is equal to a base benefit of 22% of base salary, plus an additional 0.5% of this salary for each year of service up to a maximum of 30 years of service, plus an additional amount between 10% and 45% of this salary based on degree of impairment. If the member's total benefit is less than 30% of this salary and the member has fewer than 4 years of service, then the benefit is payable for a period equal to the years of service of the member. Otherwise, the benefit is payable for life.

A. Summary of Plan Provisions (continued)

Amount of Benefits (continued)

d. Disability Retirement (continued)

Hired after 1989 (continued)

Class 3 Impairment:
All other impairments that are not Class 1 or Class 2. The disability benefit is equal to a base benefit of 1% of base salary for each year of service up to a maximum of 30 years of service, plus an additional amount between 10% and 45% of this salary based on degree of impairment. If the member's total benefit is less than 30% of this salary and the member has fewer than 4 years of service, then the benefit is payable for a period equal to the years of service of the member. Otherwise, the benefit is payable until age 52, at which time the member is entitled to a retirement benefit based on 20 years of service.

e. Termination

If a member ends employment other than by death or disability before completing 20 years of active service, the member shall be entitled to the member's contributions plus accumulated interest. This benefit is not available to converted members.

If termination is after earning 20 years of service, the termination benefit is the accrued retirement benefit determined as of the termination date and payable commencing of the normal retirement date. The member may elect to receive a reduced early retirement benefit.

f. Pre-Retirement Death

Surviving Spouse

If a member dies other than in the line of duty, the spouse's benefit is equal to 60% of the monthly benefit the member was receiving or was entitled to receive on the date of death.

If a member dies in the line of duty, the spouse's benefit is equal to the monthly benefit the member was receiving or was entitled to receive on the date of death.

In either case, if the member does not have 20 years of service or is not at least age 52 on the date of death, the benefit is computed as if the member does have 20 years of service and is age 52 on the date of death.

A. Summary of Plan Provisions (continued)

Amount of Benefits (continued)

f. Pre-Retirement Death (continued)

Children	A payment shall be made to each child of a deceased member equal to 20% of the member's benefit until the later of (a) the date the child becomes age 18, or (b) the date the child becomes age 23 if enrolled in a qualified school. If a child is at least 18 and is mentally or physically incapacitated, the child is entitled to an amount equal to the greater of 30% of the base salary, or 55% of the member's benefit payable for the duration of the incapacity. If the member does not have 20 years of service or is not at least age 52 on the date of death, the benefit is computed as if the member does have 20 years of service and is age 52 on the date of death.
Dependent Parents	If a deceased member leaves no surviving spouse and no qualified child but does leave a dependent parent or parents, an amount equal to 50% of the member's benefit shall be paid to the parent or parents jointly during their lifetime. If the member does not have 20 years of service or is not at least age 52 on the date of death, the benefit is computed as if the member does have 20 years of service and is age 52 on the date of death.
No Spouse or Dependent	If a deceased member leaves no surviving spouse, no qualified dependent child, nor a dependent parent, a refund of the member's contributions plus accumulated interest will be made to the member's estate.

g. Additional Death Benefits: A funeral death benefit is paid to the heirs or estate upon the member's death from any cause and is equal to at least $12,000. An additional death benefit of $150,000 is paid from the Pension Relief Fund to a surviving spouse, children, or parent(s) if death occurs in the line of duty.

Member Contributions: Members are assumed to contribute at the rate of 6% of salary until they have completed 32 years of service.

A. Summary of Plan Provisions (continued)

Withdrawal from Fund	If a member's employment is terminated prior to eligibility for a retirement annuity, the member may withdraw their contributions form the Fund.
Deferred Retirement Option Plan ("DROP")	The DROP is an optional form of benefit, which allows members who are eligible for an unreduced retirement benefit to continue to work and earn a salary while accumulating a DROP benefit payable in a lump sum or three annual installments. A member who elects to enter the DROP shall execute an irrevocable election to retire on the DROP retirement date. The member shall select a DROP retirement date not less than 12 months and not more than 36 months after the member's DROP entry date. While in the DROP, the member shall continue to make applicable fund contributions. When a member enters the DROP, a "DROP frozen benefit" will be calculated. This is equal to the member's monthly retirement benefit based on accrued service and base salary as of the date member enters the DROP. Upon DROP retirement, the member is eligible to receive a lump sum equal to the amount of the DROP frozen benefit multiplied by the number of months in the DROP. You may elect to receive this amount in three annual installments instead of in a single lump sum. In addition, the member will receive a monthly retirement benefit equal to the DROP frozen benefit. The member will not continue to accrue service credit for the years in the DROP. Cost of living adjustments will not apply to the frozen monthly benefit while in the DROP. The cost of living adjustments will begin to be applied to the frozen monthly benefit, however, in the year after the year in which the member retires. If the member elected to participate in the DROP, the member may, upon retirement, elect to forego DROP benefits, and instead receive monthly retirement benefits calculated as if the member never elected to participate in the DROP. These benefits would be based on accrued service and base salary as of the date the member retires.

A. Summary of Plan Provisions (continued)

Forms of Payment	
a. Single Life Annuity	Member will receive a monthly benefit for life, but there are no monthly payments to anyone after death.
b. Joint with 60% Survivor Benefits	Member will be paid a monthly benefit for life. After death, 60% of the benefit will be paid to the spouse or parent for their lifetime or the dependent until age 18.
Cost-of-Living Adjustments	Benefits for retired members are increased annually based on increases in the CPI-U index. The increase is subject to a 3% maximum and 0% minimum.
Changes in Provisions	No changes since prior valuation.

DEFINITIONS OF TECHNICAL TERMS

SECTION VII - DEFINITIONS OF TECHNICAL TERMS

A. Definitions of Technical Terms

Actual Rate	For valuations prior to June 30, 2011, the contribution rate expressed as a percentage of covered payroll on an annual basis (not less than 0.0%) that is the result of applying applicable smoothing rules to the prior year Actual Rate and current year True Rate. For valuations beginning June 30, 2011, the contribution rate does not pertain to the smoothing rules previously applied.
Actuarial Accrued Liability (AAL)	That portion, as determined by a particular Actuarial Cost Method, of the Present Value of Future Benefits (PVFB) and expenses which is not provided for by future Normal Costs. Generally this means the portion of the PVFB attributable to past service.
Actuarial Assumptions	Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; changes in compensation and Government provided pension benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and other relevant items.
Actuarial Cost Method	A procedure for determining an actuarially equivalent allocation of the Present Value of Future Benefits to time periods, usually in the form of a Normal Cost and an Actuarial Accrued Liability.
Actuarially Equivalent	A method of making the actuarial present value of two series of payments equal as of a given date using the same assumptions.
Actuarial Gain/(Loss)	The difference between actual unfunded Actuarial Accrued Liability and anticipated unfunded Actuarial Accrued Liability — during the period between two valuation dates. It is a measurement of the difference between actual and expected experience.
Actuarial Present Value	The single amount now that is equal to a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest and by probabilities of payment.
Actuarial Valuation	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.

A. Definitions of Technical Terms (continued)

Actuarial Valuation Date	The date as of which an actuarial valuation is performed.
Amortization	The payment of a present value financial obligation on an installment basis over a future number of years.
Annual Required Contribution of the Employer (ARC)	The employer's periodic required contributions to a defined benefit pension plan, calculated in accordance with the plan provisions, actuarial assumptions, actuarial cost method and other actuarial method prescribed by Governmental Accounting Standards No. 25 and No. 27.
Creditable Service	Service credited under the system that was rendered before the date of the actuarial valuation.
Funding Policy	The program for the amounts and timing of contributions to be made by plan members, employer, and other contributing entities (for example, state government contributions to a local government plan) to provide the benefits specified by a pension plan.
Level Dollar Amortization Method	The amount to be amortized is divided into equal dollar amounts to be paid over a given number of years; part of each payment is interest and part is principal (similar to a mortgage payment on a building). Because payroll can be expected to increase as a result of inflation, level dollar payments generally represent a decreasing percentage of payroll; in dollars adjusted for inflation, the payments can be expected to decrease over time.
Normal Cost (NC)	That portion of the present value of future benefits which is allocated to a valuation year by the Actuarial Cost Method. The normal cost is specific to the cost method used.
Plan Assets	Resources, usually in the form of stocks, bonds, and other classes of investments, that have been segregated and restricted in a trust, or equivalent arrangement, in which (a) employer contributions to the plan are irrevocable, (b) assets are dedicated to providing benefits to retirees and their beneficiaries, and (c) assets are legally protected from creditors of the employer(s) or plan administrator, for the payment of benefits in accordance with the terms of the plan.

A. Definitions of Technical Terms (continued)

Plan Members	The individuals covered by the terms of a pension plan. The plan membership generally includes employees in active service, terminated employees who have accumulated benefits but are not yet receiving them, and retired employees and beneficiaries currently receiving benefits.
Present Value of Future Benefits (PVFB)	Projected benefits estimated to be payable to plan members (retirees and beneficiaries, terminated employees entitled to benefits but not yet receiving them, and current active members upon retirement) as a result of their service through the valuation date and their expected future service. The actuarial present value of projected future benefits as of the valuation date is the present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment (taking into account mortality, turnover, probability of participating in plan retirement, etc.). Alternatively, it is the amount that would have to be invested on the valuation date so that the amount invested plus investment earnings will provide sufficient assets to pay the projected benefits when due.
True Rate	The precise actuarial contribution rate (not less than 0.0%) determined by summing the Normal Cost and amortization of unfunded Actuarial Accrued Liability and dividing by anticipated payroll.